

Dear Sir or Madam,

I am writing this letter in response to the FCC request for public comment related to the commission's spectrum policies, ET Docket No. 02-135.

I am a Professor of Astronomy at the California Institute of Technology (Caltech) and the Director of Caltech's Owens Valley Radio Observatory (OVRO), a radio astronomy facility based in the Owens Valley of eastern California. OVRO is the largest private radio observatory in the world, and has operated numerous telescopes at meter, centimeter and millimeter wavelengths for over four decades. During that time, many important astronomical discoveries have resulted from astronomers and students from the U.S. and around the world using our telescopes to study the universe at radio wavelengths. Protection and control of the radio spectrum has been important to these successes, and remains critical to the future of our scientific mission.

Atoms and molecules in the universe emit radiation at specific frequencies, and this radio emission provides us with unique information about the physical conditions in the nearby interstellar space as well as in distant parts of our universe. These radio frequencies have enjoyed protection from interference and commercial activity since the earliest days of spectrum management. In addition, here in the U.S. and in others countries there are areas set aside as "radio quiet zones", where harmful radio emissions are kept to a minimum to enable more wide-ranging study of the universe. OVRO and the radio community appreciate the efforts the FCC makes to preserve our ability to explore the radio universe.

As the FCC examines its goals and methods for administering the radio spectrum, it is critical that the radio astronomy community be directly involved in the process. We support the concept of more efficient use of the spectrum, but this must take place within a framework which guarantees protection of our scientific capability. There are numerous ongoing efforts in our community to deal with Radio Frequency Interference (RFI) mitigation and propagation (and more engineering research may lead to new opportunities), but careful administration and protection of the spectrum is key to our future. Although our use of the spectrum is non-profit, it would be a mistake to underestimate the contribution to society our research makes - four Nobel prizes have been awarded for discoveries in radio astronomy (more than any other area of astronomy research).

It is important that any changes to the FCC policies related to spectrum use are made in direct consultation and cooperation with the radio astronomy community.

Thanks you for your consideration,

Sincerely,

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